

## CLAIMS

We claim:

1. A method for use in a computer system, operating in a peer-to-peer environment having a host peer and at least one non-host peer, and for ordering operation requests of the peers, the operation requests being one of a list of recognized operations which may be requested, comprising:

receiving, by the host peer, at least one operation request from the provided list; and

assigning, by the host peer, a unique version number to the at least one operation request.

2. The method of claim 1, further comprising processing, by the host peer, the operation requests in the order of the assigned version number.

3. The method of claim 2, further comprising sending, by the host peer, an operation order and assigned version number to each peer in the peer-to-peer environment, the order and the version number being associated with the operation request.

4. The method of claim 3, further comprising processing, by the receiving peer, the operation order in the order of the assigned version number.

5. The method of claim 1, wherein the operations are name table operations.

6. A computer readable medium containing computer executable instructions for performing a method for use in a computer system, operating in a peer-to-peer environment having a host peer and at least one non-host peer, and for ordering operation requests of the peers, the operation requests being one of a list of recognized operations which may be requested, the method comprising:

receiving, by the host peer, at least one operation request from the provided list; and

assigning, by the host peer, a unique version number to the at least one operation request.

7. A computer system having a processor, a memory, and an operating environment, the computer system operable to execute a method within a peer-to-peer environment having a host peer and at least one non-host peer for ordering operation requests of the peers, the operation requests being one of a list of recognized operations which may be requested, the executable method comprising:

receiving, by the host peer, at least one operation request from the provided list; and

assigning, by the host peer, a unique version number to the at least one operation request

8. A method for use in a computer system, operating in a peer-to-peer environment having a host peer and at least one non-host peer, and for requesting operations of the host peer, the operations being one of a list of recognized operations which may be requested, comprising:

sending, by the non-host peer, at least one operation request from the provided list to the host peer; and

receiving, by the non-host peer, an operation order and an assigned unique version number associated with the operation request.

9. The method of claim 8, further comprising processing, by the receiving peer, the operation order in the order of the assigned version number.

10. The method of claim 8, further comprising determining whether the assigned version number received is the next in the sequence of version numbers processed by the receiving non-host peer, and if it is not, queuing the operation order until the version number is next in the sequence of version numbers processed by the receiving peer.

11. A computer readable medium containing computer executable instructions for performing a method for use in a computer system, operating in a peer-to-peer environment having a host peer

and at least one non-host peer, and for requesting operations of the host peer, the operations being one of a list of recognized operations which may be requested, the method comprising:

sending, by the non-host peer, at least one operation request from the provided list to the host peer; and

receiving, by the non-host peer, an operation order and an assigned unique version number associated with the operation request.

12. A computer system having a processor, a memory, and an operating environment, the computer system operable to execute a method for use within a peer-to-peer environment having a host peer and at least one non-host peer, the method for requesting operations of the host peer, the operations being one of a list of recognized operations which may be requested, the executable method comprising:

sending, by the non-host peer, at least one operation request from the provided list to the host peer; and

receiving, by the non-host peer, an operation order and an assigned unique version number associated with the operation request.

13. A method for use in a computer system, operating in a peer-to-peer environment having a current host peer and at least one non-host peer, and for selecting a new host peer, comprising:

providing each peer with an assigned indicia indicative of the order in which the peer first joined the peer-to-peer environment;

determining whether the current host peer has terminated participation in the peer-to-peer environment, and if so;

determining, by each remaining peer, if said peer has the lowest indicia indicating said peer joined the peer-to-peer environment prior to any remaining peers, and if so,

sending, by said peer to each remaining peer, a message indicating that said peer is the new host peer.

14. The method of claim 13, wherein operations within the peer-to-peer environment are performed utilizing a name table, and wherein said assigned indicia is a version number of a name table operation creating the peer.

15. The method of claim 14, further comprising requesting, by the new host peer from each remaining peer, the latest version of the name table that each remaining peer has processed.

16. The method of claim 15, further comprising determining, by the new host peer, whether any name table operations have been processed by other peers and not the new host peer, and if so, updating, by the new host peer, the name table of the new host peer and performing, by the new host peer, the missing name table operations.

17. The method of claim 16, further comprising, sending, by the new host peer, the updates made to the name table to each remaining peer.

18. A computer readable medium having computer executable instructions for performing a method for use in a computer system operating in a peer-to-peer environment having a current host peer and at least one non-host peer, and for selecting a new host peer, the method comprising:

providing each peer with an assigned indicia indicative of the order in which the peer first joined the peer-to-peer environment;

determining whether the current host peer has terminated participation in the peer-to-peer environment, and if so;

determining, by each remaining peer, if said peer has the lowest indicia indicating said peer joined the peer-to-peer environment prior to any remaining peers, and if so,

sending, by said peer to each remaining peer, a message indicating that said peer is the new host peer.

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